

APPLICATION OF BEST PRACTICES TO USMC

Each afternoon at Penn State, the ILC Team discussed the key concepts that were presented that morning and identified those that could be applied to the Marine Corps, either directly or modified to suit the unique situation of the Marine Corps. This resulted in a lengthy list of potential opportunity areas for future exploration. Since a large number of opportunity areas were identified, the ILC Team decided to focus the remainder of the ILC Initiative on the highest priority opportunity areas. Figure 5-3 below provides an academic/industry context for Supply Chain Management.

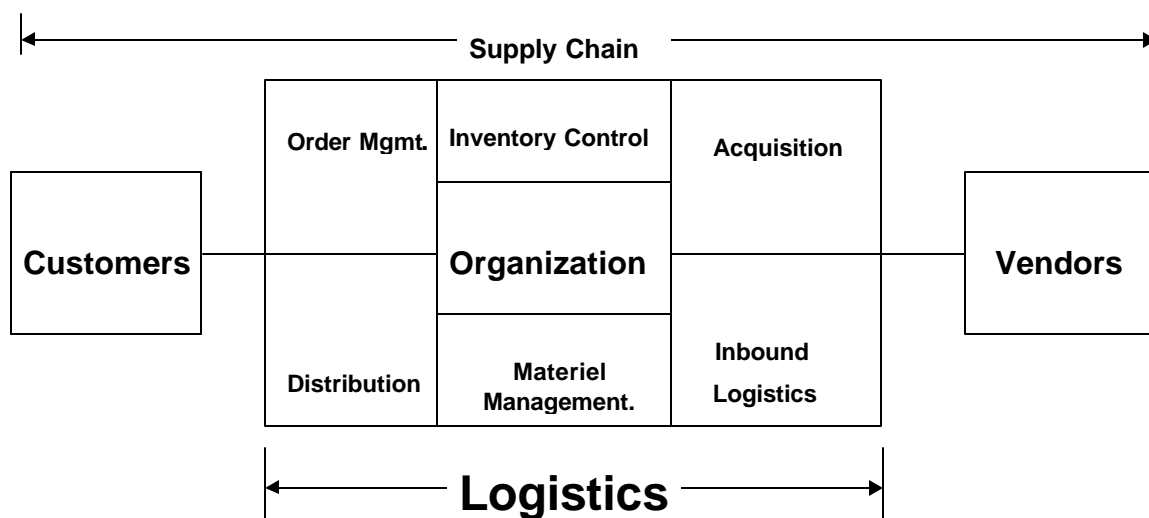


Figure 5-3: Academic/Industry Definitions

Figure 5-4 is provided to describe the Marine Corps' application of Supply Chain Management to our thinking, and provides a context in which the concepts of "Logistics" and "Supply Chain Management" are used throughout this document. Supply Chain Management blurs the distinction between traditional Command and Control (C2) concepts (Tactical, Operational and Strategic organizational levels), and of the organizational entities that provide logistics, i.e., the retail nodes, wholesale nodes, vendors, producers and distributors. In today's information rich environment, the supply chain effectively becomes the virtual and physical network streams that are focused on the end user.

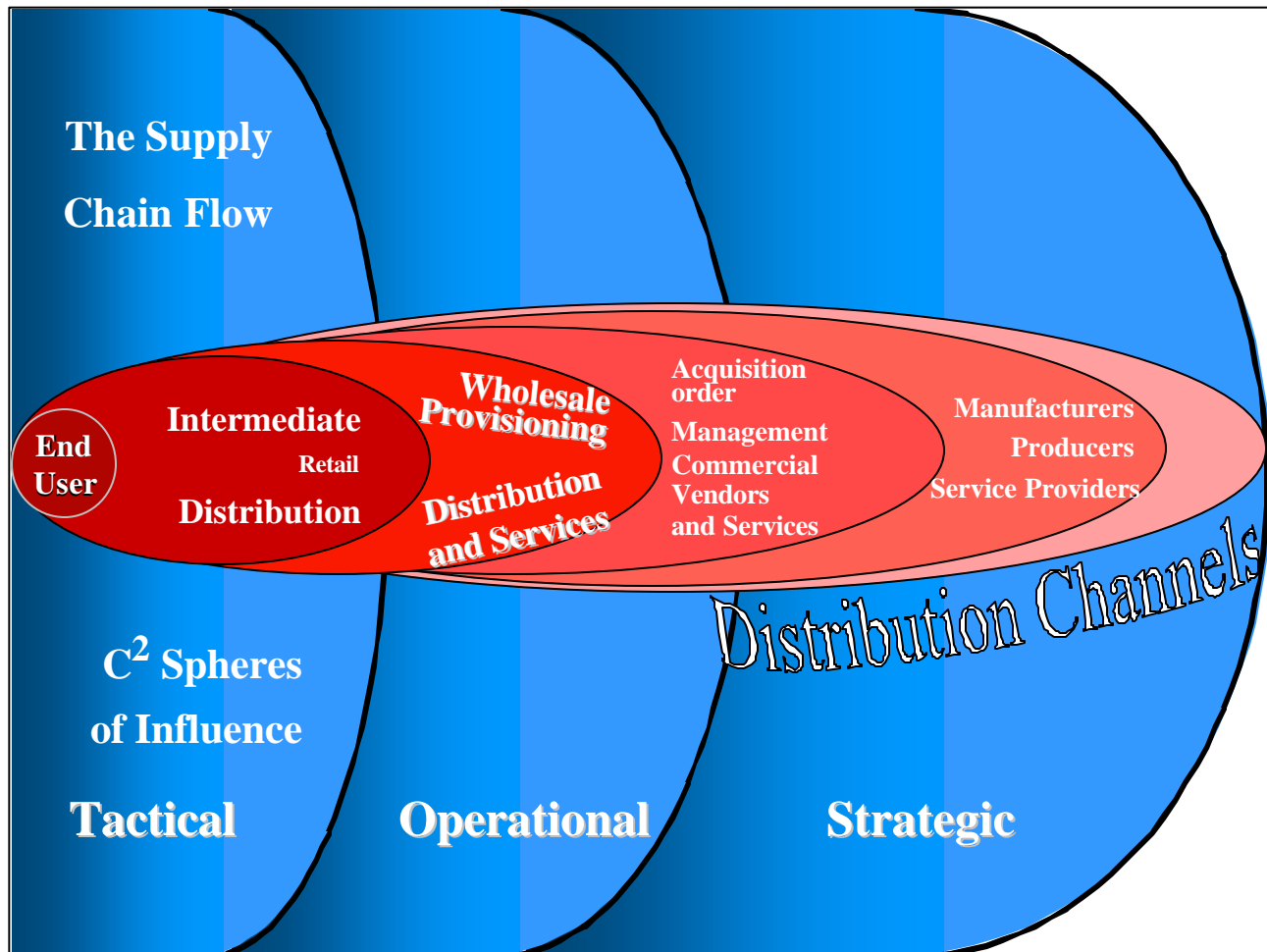


Figure 5-4: Marine Corps Interpretation of the Supply Chain

Today's availability and access to information enables a radical transformation in the way Marine Corps can manage and deliver logistics capability to the end user. The Marine Corps needs to realign its traditional processes (node– channel–node) to reflect the real blur across those nodes that current Supply Chain Management thinking presents. This is similar to the paradigm changes in the way the Marine Corps defines, shapes, and influences the battlespace - the distinctions between the Rear, Close and Deep battle are blurred and overlap, and have forced changes in operational command and control concepts. Similarly, Supply Chain Management thinking blurs organizational and physical distinctions in the ways the Marine Corps provides logistics support; it eliminates the need for redundant process steps, middlemen, overhead and indeed several skill sets. Integrated Logistics Command and Control (C2) effectively enables customers and providers throughout the supply chain to *see and influence* the total network, so that the focus is on the end user.

Quadrant Model

The Quadrant Model is based on a tool presented to the Marine Corps by Dr. Richard Young of the Pennsylvania State University Center for Logistics Research. The fundamental use of the tool is to assist a supply chain manager in categorizing inventory by its uniqueness and its value.

This Quadrant Model identifies the need for the Marine Corps to have multiple supply chains, driven by the characteristics of the items in each quadrant, rather than a single supply chain in which all products are treated the same. The vertical axis represents the uniqueness of a particular product has. Products with high uniqueness typically have one or few sources of supply. The horizontal axis represents the product's value or importance to the Marine Corps overall mission, not necessarily a products price or cost.

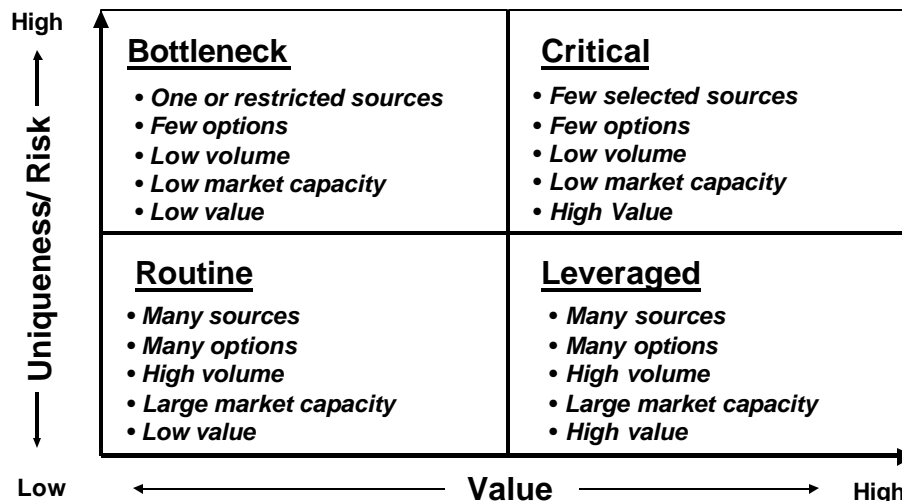


Figure 5-5: Categorization of Product - Major Quadrant Characteristics¹

¹ Source: Dr. Richard Young and Dr. Joseph Cavinato of Pennsylvania State University

Critical Items

The critical quadrant is characterized by high uniqueness and high mission value. This indicates that the items in this quadrant are highly valued by the enterprise, and there are typically few options and sources for obtaining the materials in the critical quadrant. The implications for the Marine Corps when handling critical items are:

- Strive for high quality relationships
- Increase the role of selected suppliers
- Supply chain philosophy – shared outcomes = total value performance
- Vendor relationship philosophy – strategic

Bottleneck Items

The bottleneck quadrant is characterized by high uniqueness and low mission value. The items in this quadrant are not particularly valued by the enterprise, however, there are likely few options and sources for obtaining the materials in the bottleneck quadrant. The implications for the Marine Corps when handling bottleneck items are:

- Ensure supply continuity not to disrupt business
- Attempt to reduce uniqueness
- Supply chain philosophy – performance requirements, penalties and incentives
- Vendor relationship philosophy – collaborative

Leveraged Items

The leveraged quadrant is characterized by low uniqueness and high mission value. The items in this quadrant are valuable to the enterprise. However, there are likely many options and sources for obtaining the materials in the leveraged quadrant. The implications for the Marine Corps when handling leveraged items are:

- Maximize commercial advantage
- Maintain competition in the marketplace
- Supply chain philosophy – price and delivery
- Vendor relationship philosophy – collaborative

Routine Items

The routine quadrant is characterized by low uniqueness and low mission value. The items in this quadrant are not particularly valued by the enterprise, typically because of their commonplace nature (i.e. copy paper or nails). There are likely many options and sources for obtaining the materials in the routine quadrant. The implications for the Marine Corps when handling routine items are:

- Simplify the procurement and acquisition process
- Reduce management and handling effort
- Supply chain philosophy – total cost approach
- Vendor relationship philosophy – transactional

Vendor Relationship Management

Best business practices dictate that relationships should depend on the type of product being acquired. For example, paper clips have low mission value and uniqueness, therefore relationships between the Marine Corps and the vendor should be transactional (three bids and a buy). Conversely, Critical Low Density (CLD) items are unique and highly mission valuable to achieving the Marine Corps organizational mission. As such, the relationship between the the Marine Corps and the vendor should be much more strategic (e.g. sharing information; vendor owning inventory until consumed at retail location, etc).

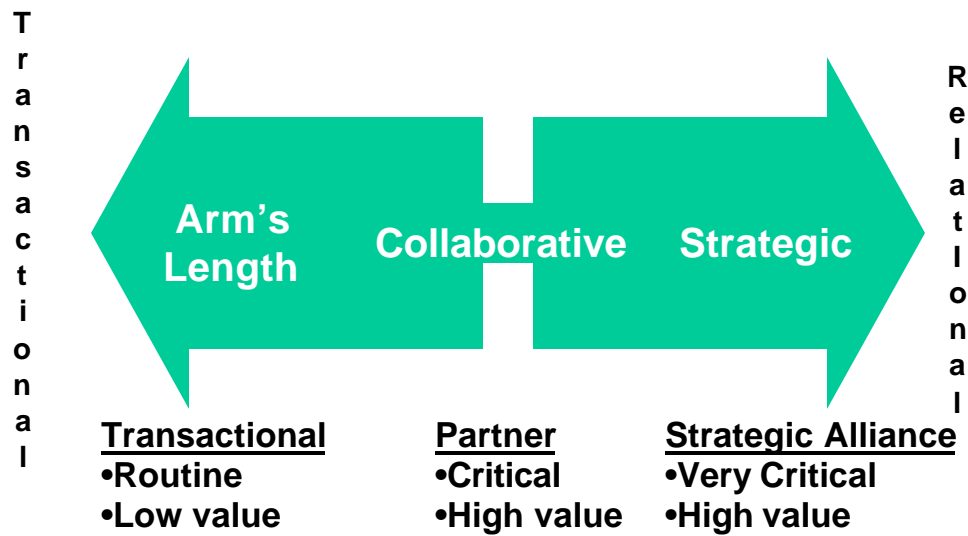


Figure 5-6: Relationship Perspectives

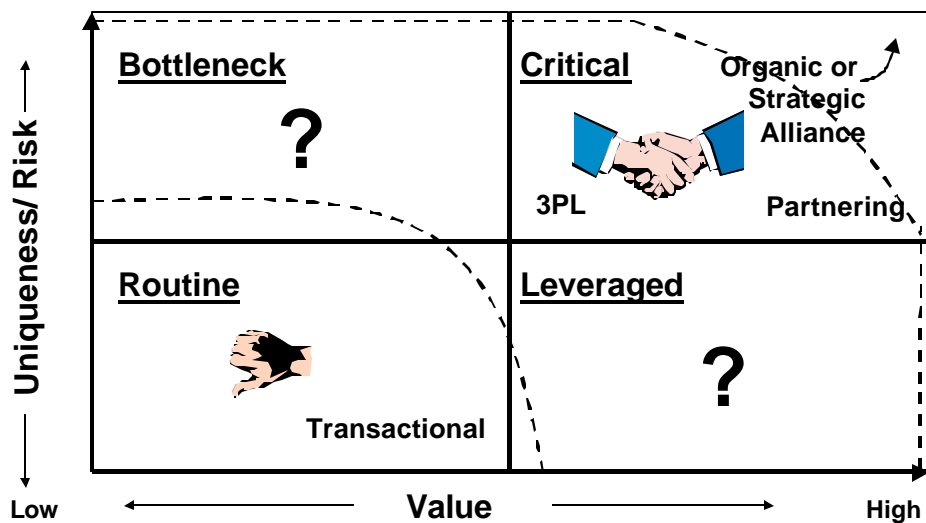


Figure 5-7: Categorization of Relationships

Product Management

Best practice industries manage different types of products differently. Today the Marine Corps manages all products as if they were critical. Unfortunately, when everything is viewed as critical, then in reality nothing is critical. The Quadrant Model could be used by the Marine Corps to more effectively manage product. Truly critical products would be managed intensely, routine products would be managed by laissez faire; and leveraged and bottleneck products would be managed by exception.

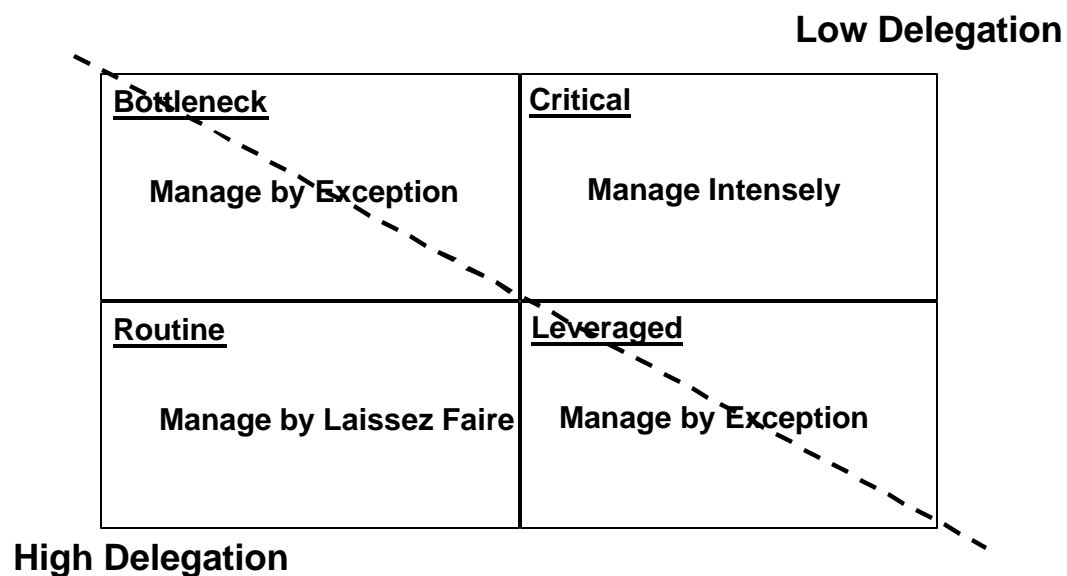


Figure 5-8: Categorization of PM/WSEM Management Responsibilities

Rationalizing Supply Chain Network Design

Industries best practice is to analyze and rationalize supply chain physical network design in order to minimize redundant inventories and improve inventory location. Industry has found that rationalizing supply chain design often yields the most significant return on investment for organizations. The Marine Corps currently stores the same product in multiple locations at multiple levels of the supply chain, and achieves combat effectiveness through mass (redundant inventory) versus precision (minimal inventory and enhanced distribution). The Marine Corps can improve mission effectiveness and combat readiness with significantly less footprint by analyzing and rationalizing where we store our inventories.

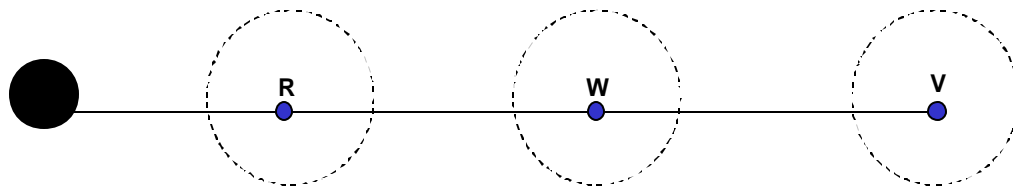
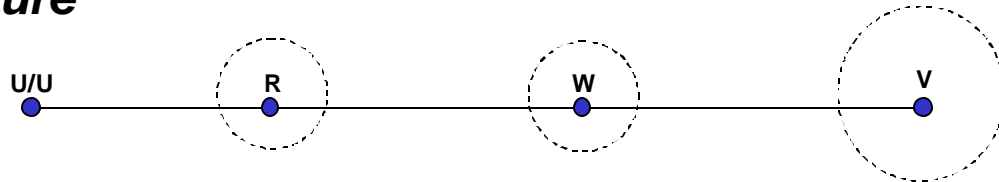
Current***Future***

Figure 5-9: Product Inventories

Echelons of Maintenance

Industry best practices for services are:

- Simplify the service work done at the customer's site
- Evacuate more complex types of service to higher service echelons
- Make greater use of onsite diagnostic and remote diagnostic capabilities
- Focus on parts management (service cannot be completed if you don't have the part)
- Use a multi-echelon inventory structure to provide improved service at a lower cost

The Marine Corps could incorporate these commercial best practices by changing where various echelons of maintenance are performed.

Current



Future

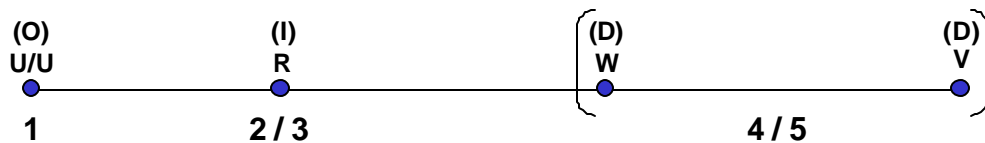


Figure 5-10: Echelons of Maintenance